

U. S. Appln. No. 09/768,904

Response After Advisory Action dated December 7, 2003

Reply to Office Action dated September 10, 2003

Page 2

REMARKS

The Applicants note that in the Advisory Action mailed on November 24, 2003, the Examiner states that Claims 9-20, 23 and 24 are allowed. The Examiner further states that Claims 1 - 8 are rejected. However, Claim 17 depends on Claim 1 and Claim 18 depends on Claim 5, so it appears that Claims 17 and 18 should have been at least objected to for depending upon rejected base claims. The Applicant's representative contacted the Examiner by telephone on December 3, 2003 and the Examiner stated that Claims 17 and 18 should have also been rejected. The Examiner therefore stated that the Advisory Action should have stated that Claims 9 - 16, 19 - 20, and 23 - 24 are allowed and Claims 1 - 8 and 17 - 18 are rejected. Therefore, the comments and arguments set forth below are based on the allowance of Claims 9 - 16, 19 - 20, and 23 - 24 and the rejection of Claims 1 - 8 and 17 - 18.

The Applicants thank the Examiner for his consideration of the arguments set forth in the Applicant's response to the Final Office Action. However, the Applicants are concerned that the Examiner stated in the Advisory Action that the amendments proposed in that response were not entered since the Examiner deemed the amendments to Claims 1 and 5 as requiring further consideration and/or search. The Applicants note that those amendments were made based upon the telephone interview conducted with the Examiner on November 12, 2003. During the telephone interview, it appeared to the Applicants' representative that agreement had been reached with the Examiner that the proposed amendments would put independent Claims 1 and 5, and the claims that depend on those independent claims, into condition for allowance. In the Advisory Action, the Examiner now appears to take a contrary position.

The Applicants submit the proposed amendments were made mainly to address the Examiner's rejection of Claims 1 - 8 under 35 U.S.C. 112, second paragraph and not to limit the scope of the claims. Therefore, no further consideration or search should be required. Further, the Applicants submit that the proposed amendments are not necessary to ensure that the claims "particularly point out and distinctly define the metes and bounds of the subject matter that will be protected by the patent grant" as required by MPEP 2171. Therefore, the arguments set forth below are based on the claims as currently on file.

U. S. Appln. No. 09/768,904

Response After Advisory Action dated December 7, 2003

Reply to Office Action dated September 10, 2003

Page 3

Rejection Under 35 U.S.C. § 112

In the Final Office Action, the Examiner rejects Claims 1 - 8 under 35 U.S.C. 112, second paragraph as being indefinite. Specifically, the Examiner asserts that, with regard to Claims 1 and 5, "it is not understood how a metal plug contact is disposed within a contact region and a field oxide layer electrically isolates separates (sic) this metal plug contact from the contact region since the metal plug contact is within the contact region." The Examiner asserts that the claim language is contradictory. The Applicants respectfully disagree that Claims 1 and 5 are indefinite.

The Examiner is reminded that a rejection under 35 U.S.C. 112, second paragraph, is appropriate only if "the language of the claim is such that a person of ordinary skill in the art could not interpret the metes and bounds of the claim so as to avoid infringement." See MPEP 2173.02. The Examiner appears to assert that one skilled in the art would not understand how a metal plug contact can be both disposed within a contact region and electrically isolated from the contact region by a field oxide layer and concludes, therefore, that such a claimed configuration must be contradictory.

The Applicants submit that one skilled in the art would understand the metes and bounds of Claims 1 and 5. Specifically, the Applicants submit that one skilled in the art would understand how an object can be both disposed within a region and electrically isolated from the region, and that such a configuration is not contradictory. For example, one can be within a swimming pool, but electrically isolated from the swimming pool by wearing insulating material. That is, the Applicants submit that just because an first element is within a second element does not means that the first element can not be electrically isolated from a second element.

By way of further explanation, but not of limitation, the Examiner is directed to Fig. 2 of the application, as amended. Fig. 2 shows a contact region 12 that is defined by the width indicated by the lines with arrows. Contact plug 7 is clearly within the contact region 12. The field oxide region 11 is deposited over a portion of the contact region 12 and the field oxide region 11 serves

U. S. Appln. No. 09/768,904

Response After Advisory Action dated December 7, 2003

Reply to Office Action dated September 10, 2003

Page 4

to electrically isolate the contact plug 7 from the contact region 12. Hence, if the claimed configuration can be shown in a figure, the Applicant submits that the language is not contradictory. Please note, however, that Fig. 2 is presented merely as an example, and the claim language should not be interpreted as limited to the embodiment depicted in Fig. 2.

During the telephone interview, the Examiner appeared to assert that position of the field oxide layer was not defined in Claim 1 and Claim 5, not, at least, with respect to the claimed contact region. The Applicants submit that the position of the field oxide layer as set forth in Claims 1 and 5 as currently on file need not be defined with respect to the contact region. Instead the position of the field oxide layer is defined with respect to the metal plug contact set forth in Claims 1 and 5. Specifically, Claim 1, as currently on file, recites, "a metal plug contact disposed within a contact region and above said field oxide layer, wherein said metal plug contact contacts said field oxide layer." (Underlining added for emphasis). Similarly, Claim 5, as currently on file, recites, "providing a metal plug contact disposed within a contact region and above said field oxide layer, wherein said metal plug contact contacts said field oxide layer." The Applicants submit that the disposition of the elements of Claims 1 and 5 is clearly defined in Claims 1 and 5, as currently on file.

The Applicants submit that when the language of Claims 1 and 5 is analyzed in light of: "(A) The content of the particular application disclosure; (B) The teachings of the prior art; and (C) The claim interpretation that would be given by one possessing the ordinary skill in the pertinent art at the time the invention was made" as required by MPEP 2173.02, the language of these claims must be viewed as meeting the requirements of 35 U.S.C. 112, second paragraph. Therefore, the Applicants respectfully request that the rejection of Claims 1 - 8 under 35 U.S.C. 112, second paragraph be withdrawn.

U. S. Appln. No. 09/768,904

Response After Advisory Action dated December 7, 2003

Reply to Office Action dated September 10, 2003

Page 5

Rejections Under 35 U.S.C. § 102**Deboer et al.**

The Examiner rejects Claims 1 - 8 and 17 - 18 under 35 U.S.C. 102(e) as being anticipated by Deboer et al. The Examiner cites Figure 5 of Deboer and asserts that Figure 5 shows a semiconductor device adapted to prevent and/or thwart reverse engineering and comprising a field oxide layer 16 disposed on a semiconductor substrate 12, a metal plug contact 39 disposed within a contact region and above said field oxide layer wherein said metal plug contact contacts said field oxide layer and wherein said field oxide layer electrically isolates said metal plug contact from said contact region. In the Response to Arguments section of the Final Office Action, the Examiner states that the contact region is considered extending widely between field oxide 16 in Figure 5. The Examiner then asserts that the field oxide 16 electrically isolates the metal plug contact from the contact region.

The Examiner asserts that Deboer discloses in figure 5 "a semiconductor device adapted to prevent and/or thwart reverse engineering," but the Examiner has not indicated any specific portion of Deboer that provides such a teaching. In fact, a word search of Deboer as presented on the USPTO web site indicates that neither the word "reverse" nor "engineering" are present in the Deboer disclosure. The Deboer disclosure states at col. 1, ll. 4 - 7, that "the present invention relates generally to the formation of contacts in integrated circuits." It appears that Deboer does not teach, disclose or suggest "a semiconductor device adapted to prevent and/or thwart reverse engineering" as claimed in Claim 1 or "a method for preventing or thwarting reverse engineering" as claimed in Claim 5. Therefore, if the Examiner maintains that Deboer discloses "a semiconductor device adapted to prevent and/or thwart reverse engineering," The Applicants respectfully request that the Examiner designate that particular part of Deboer relied on for this alleged teaching, as required under 37 C.F.R. 1.104(c)(2). Otherwise, the Applicants request that the Examiner withdraw this assertion and withdraw the rejection of Claims 1 and 5 on this grounds.

U. S. Appln. No. 09/768,904

Response After Advisory Action dated December 7, 2003

Reply to Office Action dated September 10, 2003

Page 6

Further, the Applicant disagrees with the Examiner's conclusion that Deboer teaches "said field oxide layer electrically isolates said metal plug contact from said contact region." The Examiner states that the contact region extends widely between the field oxide 16 in figure 5 of Deboer. Figure 5 clearly shows that contact 39 is in electrical contact with the region between the field oxide 16. In fact, contact plugs 39 are formed to be in electrical contact with active areas 18a and 18b. See figure 2 and col. 4, ll. 41 - 57. Therefore, the Applicant asserts that Deboer does not teach "wherein said field oxide layer electrically isolates said metal plug contact from said contact region" as claimed in Claims 1 and 5, since Deboer teaches that the contact 39 is in electrical contact with the contact region as defined by the Examiner. The Applicants assert that the Examiner has not shown that Deboer teaches each and every element of the rejected claims. Therefore, the Applicants submit that the Examiner has not established a *prima facie* case of anticipation, since the Examiner has not shown that the cited reference teaches each and every element as set forth in the rejected claims. Hence, the Applicants respectfully request that the Examiner withdraw the rejection of Claims 1 - 8 and 17 - 18 based on Deboer.

Chuang

In the Final Office Action, the Examiner rejects Claims 9 - 16, 19 - 20 and 23 - 24 under 35 U.S.C. 102(b) as being anticipated by Chuang. However, in the Advisory Action, the Examiner states that Claims 9-16, 19-20, and 23-24 are allowed. Therefore, the Applicant submits that the Examiner has found that Claims 9-16, 19-20 and 23-24 are allowable over Chuang and that this rejection has been withdrawn.

Conclusion

The Applicants respectfully submit that in light of the remarks above, all previous rejections of the claims have been overcome. Therefore, the Applicants submit that all claims are allowable over the prior art that has been cited. Favorable consideration and prompt allowance are earnestly solicited.

U. S. Appln. No. 09/768,904

Response After Advisory Action dated December 7, 2003

Reply to Office Action dated September 10, 2003

Page 7

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 12-0415. In particular, if this response is not timely filed, the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136(a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 12-0415.

I hereby certify that this correspondence is being facsimile transmitted to Fax No. 703-872-9319 and addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on


Respectfully submitted.

December 7, 2003

(Date of Deposit)

Ross A. Schmitt

(Name of Person Depositing)



(Signature)

12-7-2003

(Date)



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